

System Requirements - Elab 7.21+

In general terms, here is the list of minimum requirements to run the latest version of the LabLynx LIMS suite for the out-of-the-box Elab LIMS.

-  The web application server and database server may be installed on the same server (virtual or physical), or on separate servers for larger or more heavily-used environments.

LabLynx Elab Web Application Server

1. Operating System

- Windows Server 2019 or later

2. .NET Framework

- .NET Framework 4.x, latest available version

3. Web Server

- Internet Information Services (IIS) 10 or later

4. CPU

- Minimum: 2 CPU cores (2.5–3.0 GHz or higher)
- Recommended for production or higher concurrency: 4 CPU cores

5. Memory (RAM)

- Minimum: 8 GB RAM
- Recommended for production or dedicated instances: 8–16 GB RAM (depending on user load and background processing)

6. Storage

- Minimum: 50 GB for OS and application binaries
- Recommended Min: 200 GB for application logs and temporary files (this is a minimum expected usage. File storage needs vary greatly, and depend on volume of usage and what files are to be stored, such as receiving forms, issued reports or other documents.)

7. Network

- Reliable network connectivity between the application server and database server (if separate), with low latency and adequate bandwidth for concurrent users.

LabLynx Elab Database Server

(If combined with the web application server on a single host, aggregate the CPU, RAM, and storage requirements below.)

1. **Operating System**

- Windows Server 2019 or later, any edition suitable for SQL Server

2. **Database Platform**

- Microsoft SQL Server 2022 or later, any edition supported on the chosen Windows Server version
 - Some features may require the use of SQL Server Agent. See SQL Server documentation to determine which editions fit your needs.

3. **CPU**

- Minimum: 2 CPU cores dedicated to SQL Server
- Recommended for production or higher concurrency: 4 CPU cores or more

4. **Memory (RAM)**

- Minimum: 8 GB RAM available to SQL Server
- Recommended for production or growing databases: 16 GB RAM or more

5. **Storage**

- Minimum: 50 GB dedicated disk space for the Elab application database

Recommended: 200 GB. This typically allows for several years of data depending on usage volume.

- Additional space for:
 - SQL Server transaction logs
 - TempDB
 - Database backups and maintenance operations
- Storage should be on reliable, performant disks (e.g., SSD or equivalent performance storage) with appropriate redundancy (RAID or storage-provider equivalent).

Combined Web + Database Server (Single Host Scenario)

For environments where the Elab web application server and database server are installed on the same server (common for smaller or dedicated single-tenant deployments):

1. **CPU**

- Minimum: 2 CPU cores (2.5–3.0 GHz or higher)
- Recommended: 4 CPU cores (2.5–3.0 GHz or higher)

2. **Memory (RAM)**

- Minimum: 8 GB RAM
- Recommended: 16 GB RAM

3. **Storage**

- Typical dedicated instances are successfully operated with **~200 GB of total storage**, which accommodates:
 - OS and application binaries
 - SQL Server databases and logs
 - Uploads, reports, and attachments
 - Logs and growth over time
 - Actual required storage will vary based on data retention, sample volume, and file attachment practices.
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LabLynx Elab Client Workstation

1. **Operating System**

- Windows 10 or later

2. **Web Browser**

- A modern, standards-compliant web browser

3. **PDF Viewer / Office**

- Adobe Acrobat Reader* or a modern browser with built-in PDF viewing
- Microsoft Excel optional (for exports)

4. **Hardware**

- CPU, RAM, and disk space sufficient to meet or exceed the requirements of the chosen operating system and browser

The environment for both the servers and workstations is Microsoft. There are no dependencies on third-party software other than PDF viewing software (e.g., Adobe Acrobat Reader) for viewing reports generated by the LIMS, or Excel if exports are to be used.

*Many modern web browsers come with PDF viewers built in; in these cases, Acrobat may not be needed.